January 2002

Dedicated Dredging on the Barataria Basin Landbridge (BA-36)

Project Status

Approved Date: 2002
Project Area: 1,282 acres
Net Benefit After 20 Years: 564 acres
Project Type: Marsh Creation

Cost: $29.7 million
Status: Engineering and Design

Location

The project area contains 502 acres of emergent marsh and 780 acres of open water. It is located along the southeastern side of Bayou Rigolettes between the Harvey Cut and Bayou Perot in Jefferson Parish, Louisiana.

Problems

The upper portion of the Barataria Basin is largely a freshwater-dominated system of natural levee ridges, swamps, and fresh marsh. Marine and tidal processes (along with barrier islands, saline and brackish marshes, tidal channels, large bays, and lakes) dominate the lower portion of the basin. Historically, a small, meandering Bayou Perot and the longer and narrower Bayou Dupont, Bayou Barataria, and Bayou Villars channels provided limited hydrologic connection between the upper and lower basin. However, those hydrologic connections are much greater today because of the Barataria Bay Waterway, Bayou Segnette Waterway, and the Harvey Cut. In addition, substantial erosion and interior marsh loss between the enlarged Perot and Rigolettes bayous have also contributed to the problem.

The project area has been experiencing annual land loss rates of roughly 2.5% in recent years, mostly due to interior marsh deterioration and wind and wave induced erosion.

The previously approved Barataria Basin Landbridge Shoreline Protection Project (BBLSPP) will protect the project area from the high wave energy of the Perot and Rigolettes bayous, but the interior wetlands will continue to deteriorate from subsidence, sea-level rise, and excessive tidal exchange. The Davis Pond Freshwater Diversion Project will freshen this area, possibly converting it from brackish to intermediate marsh. However, Davis Pond will not add land-building sediments to this area, and marsh deterioration will continue even under the freshened conditions.

Restoration Strategy

This project's objectives are to fill open water areas in order to create new marsh and nourish existing marsh by using hydraulic dredges. Shoreline protection features associated with the BBLSPP will possibly be used as containment. In some large, open water areas, containment dikes will be necessary. In more isolated areas, the existing marsh can be used for containment with small containment dikes only necessary to close breaches into bayous, canals, and other channels.

The borrow site would most likely be Bayou Rigolettes. Vegetation such as brown top millet (*Panicum ramosum*) and Japanese millet (*Echinochloa frumentacea*) will be aerially seeded on the large marsh creation sites that comprise approximately 55% of the created marsh area. The remaining marsh, which consists of smaller isolated areas, will vegetate by natural colonization from the surrounding marsh.

Progress to Date

This project was selected for Phase I (engineering and design) funding at the January 2002 Breaux Act Task Force meeting. It is included as part of Priority Project List 11.

This photo illustrates the deteriorated condition of marshes in the project area.

For more project information, please contact:

Federal Sponsor:
U.S. Fish and Wildlife Service
Lafayette, LA
(337) 291-3100

Local Sponsor:
Louisiana Department of Natural Resources
Baton Rouge, LA
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Project Boundary

USGS science for a changing world

Louisiana

Project Location

N

0.25 0 0.25 Miles

0.25 0 0.25 0.5 Kilometers

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
1998 Digital Orthophoto Quarter Quadrangles

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